

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete if Known

Sheet	1	of	4	Application Number	09/728,446
				Filing Date	November 30, 2000
				First Named Inventor	Friedrich, et al
				Group Art Unit	
				Examiner Name	to be assigned
				Attorney Docket Number	LEX-0101-USA

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
✓	AA	4,190,496		Rubenstein et al	02/26/80	
	AB	4,215,051		Schroeder et al	07/29/80	
	AC	4,376,110		David et al	03/08/83	
	AD	4,631,211		Houghten	12/23/86	
	AE	4,683,202		Mullis	07/28/87	
	AF	4,689,405		Frank et al	08/25/87	
	AG	4,713,326		Dattagupta et al	12/15/87	
	AH	4,873,191		Wagner et al	10/10/89	
	AI	4,946,778		Ladner et al	08/07/90	
	AJ	5,143,854		Pirung et al	09/01/92	
	AK	5,252,743		Barrett et al	10/12/93	
	AL	5,270,170		Schatz et al	12/14/93	
	AM	5,405,783		Pirung et al	04/11/95	
	AN	5,424,186		Fodor et al	06/13/95	
	AO	5,432,018		Dower et al	07/11/95	
	AP	5,445,934		Fodor et al	08/29/95	
	AQ	5,464,764		Capecchi et al	11/07/95	
	AR	5,556,752		Lockhart et al	09/17/96	
	AS	5,700,637		Southern et al	12/23/97	
	AT	5,744,305		Fodor et al	04/28/98	
	AU	5,877,397		Lonberg et al	03/02/99	
✓	AV	6,075,181		Kucheralapati et al	06/13/00	
	AW	6,080,576		Zambrowicz et al	06/27/00	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Office ³	Number ⁴	Kind Code ⁵ (if known)				
✓	AX		WO 88/04300		University Patents Inc.	01/22/91		
✓	AY		WO 88/09810		Synthetic Genetics	02/27/90		
✓	AZ		WO 90/11364		University Patents Inc.	10/04/90		

Examiner Signature		Date Considered	10/25/00
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*EXAMINER: Initial reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if

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Sheet	2	of	4	Attorney Docket Number	LEX-0101-USA

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T ²
✓	BA	Askew et al, 1989, "Molecular Recognition with Convergent Functional Groups, Synthetic and Structural Studies with a Model Receptor for Nucleic Acid Components", J. Am. Chem. Soc. 111:1082-1090.		
	BB	Been et al, 1986, "One Binding Site Determines Sequence Specificity of Tetrahymena Pre-rRNA Self-Splicing, Trans-Splicing, and RNA Enzyme Activity", Cell 47:207-216.		
	BC	Benoist et al, 1981, "In vivo sequence requirements of the SV40 early promoter region", Nature 290:304-310.		
	BD	Benton et al, 1977, "Screening λgt Recombinant Clones by Hybridization to Single Plaques in situ", Science 196:180-182.		
	BE	Bird et al, 1988, "Single-Chain Antigen-Binding Proteins", Science 242:423-426.		
	BF	Bitter et al, 1987, "Expression and Secretion Vectors for Yeast", Methods in Enzymology 153:516-544.		
	BG	Brinster et al, 1982, "Regulation of metallothionein-thymidine kinase fusion plasmids injected into mouse eggs", Nature 296:39-41.		
	BH	Brisson et al, 1984, "Expression of a bacterial gene in plants by using a viral vector", Nature 310:511-514.		
	BI	Broglie et al, 1984, "Light-Regulated Expression of a Pea Ribulose-1,5-Bisphosphate Carboxylase Small Subunit Gene in Transformed Plant Cells", Science 224: 838-843.		
	BJ	Butler et al, The Amplified ELISA: Principles of and Applications for the Comparative Quantitation of Class and Subclass Antibodies and the Distribution of Antibodies and Antigens in Biochemical Separates," Meth. Enzymol. Vol. 73, pps. 482-523		
	BK	Chien et al, 1991, "The two-hybrid system: A method to identify and clone genes for proteins that interact with a protein of interest", Proc. Natl. Acad. Sci. USA 88:9578-9582.		
	BL	Colberre-Garapin et al, 1981, "A New Dominant Hybrid Selective Marker for Higher Eukaryotic Cells" J. Mol. Biol. 150:1		
	BM	Coruzzi et al, 1984, "Tissue-specific and light-regulated expression of a pea nuclear gene encoding the small subunit of ribulose-1,5-bisphosphate carboxylase", EMBO Journal 3(8):1671-1679.		
	BN	Frohman, 1994, "On Beyond Classic RACE(Rapid Amplification of cDNA Ends)", Vol. 4:A40-S58, Cold Spring Harbor Laboratory ISSN 1054-9805/94		
	BO	Gautier et al, 1987, "α-DNA IV:α-anomeric and β-anomeric tetrathymidylates covalently linked to intercalating oxazolopyridocarbazole. Synthesis, physicochemical properties and poly (rA) binding", Nucleic Acids Research 15(16):6625-6641.		
	BP	Gordon et al, 1989, "Transgenic Animals", Intl. Review Cytology, Vol. 113		
	BQ	Greenspan et al, 1993, "Idiotypes: structure and immunogenicity", FASEB Journal 7:437-444.		
	BR	Gu et al, 1994, "Deletion of a DNA Polymerase β Gene Segment in T Cells Using Cell Type-Specific Gene Targeting", Science 265:103-106.		
	BS	Gurley et al, 1986, "Upstream Sequences Required for Efficient Expression of a Soybean Heat Shock Gene", Mol. & Cell. Biology 6(2):559-565.		
	BT	Haseloff et al, 1988, "Simple RNA enzymes with new and highly specific endoribonuclease activities," Nature Vol. 334, 585-591		
	BU	Helene, 1991, "The anti-gene strategy: control of gene expression by triplex-forming-oligonucleotides", Anti-Cancer Drug Design 6:569-584.		
	BV	Helene et al, 1992, "Control of Gene Expression by Triple Helix-Forming Oligonucleotides", Annals N.Y. Acad. Sciences 660:27-36.		
	BW	Houghten et al, 1991, "Generation and use of synthetic peptide combinatorial libraries for basic research and drug discovery", Nature 354:84-86.		
	BX	Huse et al, 1989, "Generation of a Large Combinatorial Library of the Immunoglobulin Repertoire in Phage Lambda", Science 246:1275-1281.		
✓	BY	Huston et al, 1988, "Protein engineering of antibody binding sites: Recovery of specific activity in an anti-digoxin single-chain Fv analogue produced in Escherichia coli", Proc. Natl. Acad. Sci. USA 85:5879-5883.		

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Sheet	3	of	4	Application Number	28,446
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				Group Art Unit	
				Examiner Name	to be assigned
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OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
✓	BZ	Inoue et al, 1987, "Sequence-dependent hydrolysis of RNA using modified oligonucleotide splints and R Nase H", FEBS Letters 215(2):327-330.	
✓	CA	Inoue et al, 1987, "Synthesis and hybridization studies on two complementary nona(2'-O-methyl)ribonucleotides", Nucleic Acids Research 15(15):6131-6149.	
✓	CB	Inouye & Inouye, 1985, "Up-promoter mutations in the lpp gene of Escherichia coli", Nucleic Acids Research 13(9):3101-3110.	
✓	CC	Kohler & Milstein, 1975, "Continuous cultures of fused cells secreting antibody of predefined specificity", Nature 256:495-497.	
✓	CD	Krol et al, 1988, "Modulation of Eukaryotic Gene Expression by Complementary RNA or DNA Sequences", BioTechniques Vol. 6, No. 10, pp. 958-976	
✓	CE	Lakso et al, 1992, "Targeted oncogene activation by site-specific recombination in transgenic mice", Proc. Natl. Acad. Sci. USA 89:6232-6236	
✓	CF	Lam et al, 1991, "A new type of synthetic peptide library for identifying ligand-binding activity", Nature 354:82-86.	
✓	CG	Lavitrano et al, 1989, "Sperm Cells ad Vectors for Introducing Foreign DNA into Eggs: Genetic Transformation of Mice", Cell 57:717-723.	
✓	CH	Lemaitre et al, 1987, "Specific antiviral activity of a poly(L-lysine)-conjugated oligodeoxyribonucleotide sequence complementary to vesicular stomatitis virus N protein mRNA initiation site", Proc. Natl. Acad. Sci. USA 84:648-652.	
✓	CI	Letsinger et al, 1989, "Cholesteryl-conjugated oligonucleotides: Synthesis, properties, and activity as inhibitors of replication of human immunodeficiency virus in cell culture", Proc. Natl. Acad. Sci. USA 86:6553-6556.	
✓	CJ	Lewis et al, 1989, "Automated site-directed drug design: the formation of molecular templates in primary structure generation", Proc. R. Soc. Lond. B 236:141-162.	
✓	CK	Lo, 1983, "Transformation by Ionophoretic Microinjection of DNA: Multiple Integrations without Tandem Insertions", Mol. & Cell. Biology 3(10):1803-1814.	
✓	CL	Logan et al, 1984, "Adenovirus tripartite leader sequence enhances translation of mRNAs late after infection", Proc. Natl. Acad. Sci. USA 81:3655-3659.	
✓	CM	Lowy et al, 1980, "Isolation of Transforming DNA: Cloning the Hamster aprt Gene", Cell 22:817-823.	
✓	CN	McKinlay et al, 1989, "Rational Design of Antiviral Agents", Annu. Rev. Pharmacol. Toxicol. 29:111-122.	
✓	CO	Maher et al, 1992, "DNA Triple-Helix Formation: An Approach to Artificial Gene Repressors?", BioEssays Vol. 14 No. 12	
✓	CP	Morrison et al, 1984, "Chimeric human antibody molecules: Mouse antigen-binding domains with human constant region domains", Proc. Natl. Acad. Sci. USA 81:6851-6855.	
✓	CQ	Mulligan & Berg, 1981, "Selection for animal cells that express the Escherichia coli gene coding for xanthine-guanine phosphoribosyltransferase", Proc. Natl. Acad. Sci. USA 78(4):2072-2076.	
✓	CR	Neuberger et al, 1984, "Recombinant antibodies possessing novel effector functions", Nature 312:604-608.	
✓	CS	Nisonoff, 1991, "Idiotypes: Concepts and Applications", J. of Immunology 147:2429-2438.	
✓	CT	O'Hare et al, 1981, "Transformation of mouse fibroblasts to methotrexate resistance by a recombinant plasmid expressing a prokaryotic dihydrofolate reductase", Proc. Natl. Acad. Sci. USA 78(3):1527-1531.	
✓	CU	Platt, et al, 1994, "Independent Regulation of Adipose Tissue-specificity and Obesity Response of the Adipsin Promoter in Transgenic Mice", J. Biol.Chem., Vol. 269, No. 46, pp. 28558-28562	
✓	CV	Ripka, 1988, "Computers picture the perfect drug", New Scientist 16:54-57.	
✓	CW	Ruther et al, 1983, "Easy identification of cDNA clones", EMBO Journal 2(10):1791-1794.	

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1	CX	Santerre et al, 1984, "Expression of prokaryotic genes for hygromycin B and G418 resistance as dominant-selection markers in mouse L cells", Gene 30:147-156.		
	CY	Sarin et al, 1988, "Inhibition of acquired immunodeficiency syndrome virus by oligodeoxynucleoside methylphosphonates", Proc. Natl. Acad. Sci. USA 85:7448-7451.		
		CZ	Sarver et al, 1990, "Ribozymes as Potential Anti-HIV-1 Therapeutic Agents", Science 247:1222-1225.	
		DA	Shilo et al, 1981, "DNA sequences homologous to vertebrate oncogenes are conserved in Drosophila melanogaster", Proc. Natl. Acad. Sci. USA 78(11):6789-6792.	
		DB	Smith et al, 1983, "Molecular Engineering of the Autographa californica Nuclear Polyhedrosis Virus Genome: Deletion Mutations within the Polyhedrin Gene", J. Virol. 46(2):584-593.	
		DC	Smithies, 1985, "Insertion of DNA sequences into the human chromosomal β -globin locus by homologous recombination", Nature 317:230-234.	
		DD	Songyang et al, 1993, "SH2 Domains Recognize Specific Phosphopeptide Sequences", Cell 72:767-778.	
		DE	Stein et al, 1988, "Physicochemical properties of phosphorothioate oligodeoxynucleotides", Nucleic Acids Research 16(8):3209-3221.	
		DF	Szybalska & Szybalski, 1962, "Genetics of Human Cell Lines, IV. DNA-Mediated Heritable Transformation of a Biochemical Trait", Proc. Natl. Acad. Sci. USA 48:2026-2034.	
		DG	Takamatsu et al, 1987, "Expression of bacterial chloramphenicol acetyltransferase gene in tobacco plants mediated by TMV-RNA", EMBO Journal 6(2):307-311.	
		DH	Takeda et al, 1985, "Construction of chimaeric processed immunoglobulin genes containing mouse variable and human constant region sequences", Nature 314:452-454.	
		DI	Thomas et al, 1987, "Site-Directed Mutagenesis by Gene Targeting in Mouse Embryo-Derived Stem Cells", Cell 51:503-512.	
		DJ	Thompson et al, 1989, "Germ Line Transmission and Expression of a Corrected HPRT Gene Produced by Gene Targeting in Embryonic Stem Cells", Cell 56:313-321.	
		DK	Van Der Putten et al, 1985, "Efficient insertion of genes into the mouse germ line via retroviral vectors", Proc. Natl. Acad. Sci. USA 82:6148-6152.	
		DL	Van Heeke et al, 1989, "Expression of Human Asparagine Synthetase in Escherichia coli", J. Biol. Chemistry 264(10):5503-5509.	
		DM	Voller et al, 1978, "Enzyme immunoassays with special reference to ELISA techniques", J. Clinical Pathology 31:507-520.	
		DN	Wagner et al, 1981, "Nucleotide sequence of the thymidine kinase gene of herpes simplex virus type 1", Proc. Natl. Acad. Sci. USA 78(3):1441-1445.	
		DO	Wagner, 1994, "Gene inhibition using antisense oligodeoxynucleotides", Nature 372:333-335.	
		DP	Ward et al, 1989, "Binding activities of a repertoire of single immunoglobulin variable domains secreted from Escherichia coli", Nature 341:544-546.	
		DQ	Wigler et al, 1977, "Transfer of Purified Herpes Virus Thymidine Kinase Gene to Cultured Mouse Cells", Cell, Vol. 11:223	
	DR	Wigler et al, 1980, "Transformation of mammalian cells with an amplifiable dominant-acting gene", Proc. Natl. Acad. Sci. USA 77(6):3567-3570.		
	DS	Yamamoto et al, 1980, "Identification of a Functional Promoter in the Long Terminal Repeat of Rous Sarcoma Virus", Cell 22:787-797.		
	DT	Zaug et al, 1984, "A Labile Phosphodiester Bond at the Ligation Junction in a Circular Intervening Sequence RNA", Science 224:574-578.		
	DU	Zaug et al, 1986, "The Tetrahymena ribozyme acts like an RNA restriction endonuclease", Nature 324:429-433.		
	DV	Zaug & Cech, 1986, "The Intervening Sequence RNA of Tetrahymena is an Enzyme", Science 231:470-475.		

Examiner Signature		Date Considered	10/25/00
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